

Claims

What is claimed is:

1. A system for providing personal broadcast recording channel service using eXtensible Markup Language (XML), which provides Personal Video Recorder (PVR) channel service to a plurality of PVRs over a common network using XML, the system comprising:
  - an interface server coupled to provide a PVR channel service user interface so as to allow a corresponding communication terminal to gain access over the common network, and to control data input and output signals for any one of the entry/use/change/cancellation of the PVR channel service through the interface; and a wizard/transmission server coupled to share an input and stored DataBase (DB) through the interface server; wherein the wizard/transmission server creates personal PvrXML files using the DB and transmits the created files to the PVRs.

2. The system according to claim 1, wherein the wizard/transmission server comprises:

a PvrXML creation module for creating the PvrXML files and detailed information using information of the DB; a 5 PvrXML editing module for editing the PvrXML files created by the PvrXML creation module; a PvrXML transmission module for transmitting the PvrXML files to the PVR over the common network; an Identification (ID) code management module for processing ID codes, which correspond to any one of 10 subscriber information, member numbers, caller IDs, telephone numbers of telephone lines to which the PVRs are connected, member IDs, Serial Numbers (S/Ns) of the PVRs, and IP addresses of the PVRs, into data to be used by the PvrXML transmission module, and managing the processed data for 15 individual users.

3. The system according to claim 1, wherein the DB is any one of a web DB, a detailed information DB, a member DB, a PvrXML tag language DB, a recording scenario DB, and a 20 service DB that are used to prepare the PvrXML files and the detailed information, and is stored in memory that can be controlled by processors of the interface server and the wizard/transmission server.

4. The system according to claim 3, wherein PvrXML tags stored in the PvrXML tag language DB are at least one selected from a PvrXML group consisting of <pvr> </pvr>, tags for starting connection with the PVR; <list> </list>, tags for selecting a recording list; <title> </title>, tags for showing a title of a selected program title; <recordset> </recordset>, tags for setting recording; <attach> </attach>, tags for adding a task; <save> </save>, tags for storing entire settings; <record\_list> </record\_list>, tags for showing a title of a recorded program; <delete> </delete>, tags for deleting a recorded program; <pvr\_completion> </pvr\_completion>, tags for finishing all operations.

15 5. The system according to claim 1, wherein the PvrXML creation module parses any portion of data from a service DB, including a recording scenario, a PvrXML tag, and user input data, in PvrXML format using memory and a processor of the wizard/transmission server.

20 6. The system according to claim 1, wherein the interface is installed in the interface server to support web, Wireless Application Protocol (WAP), Automatic Response System (ARS), VoiceXML (VXML), channel broadcast, and power line communication schemes and provide access.

7. The system according to claim 1, wherein each of the PVRs comprises:

5 a control unit having at least a stream control function; a Transmission Packet (TP) interface for inputting a broadcast signal to the control unit on a Transport Packet (TP) basis; middleware coupled to the control unit to receive control signals configured such that hardware and software of the PVR are operated by the control unit; and a PvrXML 10 interpreter coupled to the control unit to interpret at least one PvrXML file received over the common network and parse the interpreted PvrXML file into the control signals.

8. The system according to claim 7, wherein the PVR 15 further comprises an input signal select control unit having electronic circuits or a software algorithm to perform an intermediation operation of selecting either a first operation of checking an input signal received from an input unit coupled to the control unit, and a control signal 20 received from the PvrXML interpreter, and allowing the middleware to operate a corresponding PVR while displaying operational status of the PVR on a screen, or a second operation of operating the corresponding PVR in a background of a picture according to the recording scenario of the 25 PvrXML file.

9. A method for providing personal broadcast recording channel service using XML, the method comprising a server-side process of an interface server performing:

5           the step of inputting information about member entry, to a member DB; the step of receiving information about members' recording preferences from member terminals and inputting the received information to a corresponding DB; the step of processing information based on viewers' analyzed  
10          tendencies and inputting the processed information to a corresponding DB; the step of extracting keywords from the input information, compiling an index of the extracted keywords, and storing detailed information, that corresponds to the keywords, in a detailed information DB while analyzing  
15          the members' recording preferences; the step of a wizard/transmission server preparing recording scenarios based on detailed information related to the analyzed information; the step of creating files in PvrXML format based on the recording scenarios using a PvrXML conversion  
20          unit; and the step of transmitting the PvrXML files and the detailed information to corresponding members' PVRs through a common network.

10. A method for providing personal broadcast recording channel service using XML, the method comprising a client-side process of a PvrXML interpreter of each PVR performing:

5           the step of receiving a PvrXML file and detailed information, and recording and storing the detailed information on a corresponding storage device (HDD); the step of parsing details of script document of the PvrXML file into a control signal for either remote recording or channel guide  
10          control of the PVR, and inputting the parsed control signal using middleware; and the step of the middleware inputting operational instructions, which corresponds to the input control signal, to a control unit.

15          11. The method according to claim 10, wherein the client-side process further comprises:

          the step of allowing a menu screen to pop up on a screen of a display device in response to a user's manipulation signal; and the step of allowing a recording  
20        list, which corresponds to the recorded and stored information, to be displayed on the menu screen, and allowing detailed information, which includes advertisement, to be further displayed on the menu screen when a user selects each item from the recording list.